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# 7/A  
11/12/02  
Muller

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE APPLICATION OF: Krishnaswamy RAMKUMAR, ART UNIT: 2813  
et al.

SERIAL NO.: 09/975,256

EXAMINER: Hogans, David L.

FILING DATE: October 12, 2001

FOR: METHOD FOR GROWING ULTRA THIN NITRIDED OXIDE

**AMENDMENT**

ASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

SIR:

Responsive to the outstanding Office Action dated August 5, 2002, entry of the following  
is respectfully requested.

**IN THE SPECIFICATION**

On page 6, at lines 8-17, please replace the paragraph there with the following paragraph  
as follows:

A<sup>1</sup> A conventional method for incorporating nitrogen into a gate oxide layer comprises  
annealing a preformed oxide layer in the presence of nitrous oxide gas (N<sub>2</sub>O). Annealing with  
N<sub>2</sub>O, however, is generally not effective in incorporating more than 1 to 1.5 wt.% of N in the gate  
oxide layer. Additionally, in order to achieve significant nitrogen incorporation using N<sub>2</sub>O gas, it  
has been found necessary to pre-heat the gas before it enters the furnace. Preheating is usually  
conducted by flowing the N<sub>2</sub>O gas through a torch that is maintained at a temperature of from  
800 °C to 950 °C. A helical torch is typically employed to increase the residence time of the gas  
in the torch. The N<sub>2</sub>O nitridation anneal itself is typically conducted at temperatures in excess of  
900 °C.